

Claims 1-52 (Cancelled.)

53. (Previously Presented) An optical network system comprising:

a data service hub for sending downstream optical data signals on a first optical waveguide, and for sending downstream optical RF modulated television broadcast signals on a second optical waveguide;

a plurality of optical taps, each optical tap dividing downstream optical signals comprising a combination of the downstream optical data signals and the optical RF modulated television broadcast signals between a plurality of optical waveguides coupled to a plurality of subscriber optical interfaces;

each subscriber optical interface providing electrical communications to a subscriber, each subscriber optical interface coupled to a respective optical tap by an optical waveguide, for receiving the downstream optical signals from a respective optical tap and converting the downstream optical signals into downstream electrical signals; and

a laser transceiver node disposed between the data service hub and the optical tap, for communicating optical signals to and from the data service hub and to and from a respective optical tap, for apportioning bandwidth that is shared between groups of subscriber optical interfaces connected to a respective optical tap, the laser transceiver node further comprising:

a plurality of multiplexers for providing downstream modulation signals to respective optical transmitters and for receiving upstream electrical signals from respective optical receivers, each multiplexer corresponding to a respective optical tap;

a plurality of bi-directional splitters for receiving downstream and upstream optical signals, each bi-directional splitter coupled to a respective optical transmitter and a respective optical receiver;

an optical transceiver coupled to the first optical waveguide for converting downstream optical data signals from the first optical waveguide into downstream electrical data signals, for converting upstream electrical data signals into optical data signals;

a routing device coupled to each multiplexer and the optical transceiver, for assigning downstream electrical data signals received from the optical transceiver to predetermined multiplexers, for combining upstream electrical data signals from respective multiplexers into one electrical signal that modulates the optical transceiver; and

an optical splitter coupled to the second optical waveguide and respective optical diplexers, the diplexers for combining the downstream optical RF modulated television broadcast signals from the second optical waveguide with downstream optical data signals.

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54. (Currently Amended) The optical network system of claim 53, wherein the laser ~~transceiver node further comprises~~ optical receivers for ~~converting~~ convert upstream optical data signals from a respective optical tap into upstream electrical data signals.

55. (Currently Amended) The optical network system of claim 53, wherein the laser ~~transceiver node further comprises~~ optical transmitters for ~~converting~~ convert downstream electrical data signals from a respective multiplexer into downstream optical data signals.

56. (Previously Presented) The optical network system of claim 53, wherein each subscriber optical interface receives upstream electrical data signals from a subscriber and converts the upstream electrical data signals into upstream optical data signals and sends the upstream optical data signals over an optical waveguide towards a corresponding optical tap.

57. (Currently Amended) The optical network system of claim 53, wherein each optical tap combines upstream optical data signals received from a plurality of optical waveguides and propagates the combined upstream optical data signals over a single optical waveguide[[]].

58. (Previously Presented) The optical network system of claim 53, wherein the laser transceiver node accepts gigabit Ethernet optical signals from the data service hub and partitions the Ethernet optical signals into a predetermined number of groups.

59. (Currently Amended) The optical network system of claim 53, wherein ~~the laser transceiver node comprises at least one optical transmitter~~, each optical transmitter comprises one of a Fabry-Perot laser, a distributed feedback laser, and a vertical cavity surface emitting laser (VCSEL).

60. (Previously Presented) The optical network system of claim 53, wherein the optical tap routing device manages upstream and downstream data protocols.

61. (Previously Presented) The optical network system of claim 60, wherein one of the protocols comprises a time division multiple access protocol.

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62. (Previously Presented) The optical network system of claim 53, wherein data bit rates for the upstream and downstream optical signals are substantially symmetrical.

Claims 63-67 (Cancelled.)

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